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Original Department.

Communications.

A CASE OF ALGIDA FEBRIS.

BY W. BEATY, M.D.,
Of Scotland, Ind.

The so-called algida febris we see spoken of in the medical works is, from some cause, receiving little attention from the medical profession of late years It is certainly not because such a disease does not exist, or that it is not so prevalent as formerly. No physician who has a practice in a malarious district will deny this malady is common. Most physicians of this day and age class all intermittents that tend toward congestion as one pernicious fever, and no distinction between the different varieties is given; consequently the young practitioner is often embarrassed in his attempts toward diagnosis.

If we examine Da Costa's *Medical Diagnosis*, page 755, we find the algid form of congestive fever simply alluded to as one of malignant character; the chief characteristic between this and the other forms of congestive fever is the icy or marble coldness that accompanies the paroxysm.

In Bartlett's *Treatise on Fevers*, page 402, will be found a more extensive history of this variety of fever. He says, "algid fever is not generally, as has been said, a mere prolongation of the cold stage of a paroxysm. I have rarely seen it commence in this manner. There is between these two conditions a striking contrast, even. In the first stage of a simple paroxysm the sensation of cold is out of all proportion to the actual diminution of temperature of the surface, while in algid fever the cold is not felt by the patient, even when the skin is icy. It is commonly during the period of reaction that the characteristic symptoms begin to show themselves; often they supervene suddenly in the midst of a reaction which appeared to be open and frank. The pulse becomes slow, flags, and disappears; the extremities, the face and the trunk, become successively and rapidly cold; the abdomen alone preserves a slight degree of warmth; the skin feels as cold as marble; the tongue becomes flat, white and moist; there is no thirst; most generally the action of the heart is slow, feeble and struggling; the mind is unimpaired; his physiognomy is with mobility; the most absolute impassivity is stamped upon his countenance; its expression is dead. If one is not familiar with this state of things, the kind of calm which follows the febrile excitement may easily be mistaken for a great amelioration, attributable, perhaps, to sanguineous depletion, and the mistake is revealed only by the sudden and unlooked-for death of the patient."

In Dr. E. M. Bailly's *Traité des Fievres Intermittentes*, page 235, where he is speaking of the expression of the countenance in these cases, he says, "that in algid fevers the patients pass from life to death without our being able to foresee this event; we can hardly believe them to be sick, even, either during the intermission or the paroxysms, especially in the early period of the latter."

A very interesting case of the algid variety has recently come under my observation; indeed, it is of such a character that I cannot refrain from reporting it to your journal.

Case.—On the evening of the 26th of June,

1875, Mrs. D., æt. 22, called at my office for medical aid; she stated that her health had been on the decline for about two months, and that within the last three weeks her case, as she thought, was becoming alarming.

She had been under the care of Dr. Hannan for a considerable length of time, and as he had done her no good, she became dissatisfied, and sought medical aid somewhere else.

I told her perhaps Dr. H. was treating her case as well as I or any other physician, as I knew him to be a man of considerable talent. Cases of the character of hers were very troublesome, and always gave us a great deal of annoyance, and the only way of treating them was on the principle, "that drops of water make up great rivers; so, little by little, we could cure such maladies, a little to-day and a little to morrow, until we have established a cure."

She was debilitated, pale, and of a nervous temperament; appetite poor; rested badly at night; would have all sorts of ugly and frightful dreams; also would perspire profusely at night; at times she would complain of some pain in left hypochondriac and left lumbar regions; kidneys were normal; bowels very irregular; sometimes would not move for three or four days; tongue covered with a white, and at times a yellowish coat; there was a constant dull, heavy, throbbing pain in her head; pulse 104; temperature in axilla 90°. All the symptoms thus enumerated had been gradually getting worse from the dawn of her troubles. Prescribed—

℞. Hyd. chlorid. mite., gr.iv
Colocynthis, gr.iij.

Sig. To be taken at bedtime.

Also—

℞. Quinia sulphas, gr.v
Ferri. subcarbonas, gr.v.

Sig. To commence next morning at 4 o'clock. Given every four hours.

This was all I gave her, and told her, as she was leaving my office, that I would call and see her on the evening of the 27th (next day), as I would be in the neighborhood in which she lived. By this means, I would have more time to study her case, as it was, in my mind, rather obscure, and also acting upon the principle that every physician ought to, "that a correct diagnosis for the radical cure of disease is the great essential."

But, on the same evening that she was to see me, about dark, I was summoned by her husband in great haste, to see her; she was much worse than she had ever been. On arriving at her residence, I found her in rather an alarming condition; indeed, I was very much surprised to see such a change in her in so short a time. On approaching her bedside, I found her perfectly rational. I began to question her, and found that she began to chill a short time after she saw me in the morning. There was violent dyspnœa; pulse 145, regular, hard and wiry; not, as is generally the case, irregular, slow and weak; the extremities were of a marble coldness; even the breath seemed to chill; only the trunk, of the whole body, seemed to possess a slight degree of warmth; the skin was of a livid hue, and was covered from head to foot with a cold, clammy, sticky sweat. She revealed to me the fact that she had been troubled with intermittent last fall and part of the winter, and stated that she neglected to tell me that she had, every other day, sometimes every day, chilly sensations, for the last two months that she had been feeling so poorly. At once I saw through the whole case; the diagnosis was clear; it was very manifest to my mind that the case was one of malarial trouble.

The treatment suggested itself. The cathartic prescribed was not given; gave, to reduce the heart's action, four drops veratrum viride, in ten drops tincture opii; repeated every half hour until the pulse was sufficiently reduced; also *spiritus vini gallici* was given freely from the very beginning. Mustard was applied to the hands and feet; for the dyspnœa, hot flannels were applied to the thorax. This constituted the treatment during the paroxysmal stage. Immediately after this, the sulphate of quinine was given, fifteen grain doses, every three and a half hours.

On the 27th, 10 o'clock, A. M., I visited patient; found her resting well; breathing natural; pulse 100, and not so strong as on the previous evening; temperature in axilla 93°; skin moist; complained of an intermittent pain in the left hypochondriac region; bowels had moved spontaneously during the night; kidneys acting normal, but urine very high-colored. Still continued to give quinine and stimulants; in addition to this, I prescribed—

℞. Spts. nitr. dulc., ℥ss
Potassium bromide, gr.xvj. M.

Sig. A teaspoonful to be given every two

and a half hours, commencing at 1 o'clock, P.M., until three doses were given.

On the evening of the 27th I was sent for in great haste; it was reported that she was having another chill, and was sinking very rapidly. Without delay, I hurriedly made preparations to go; I arrived at her residence just ten minutes from the time I started. Words can hardly express the scene I witnessed; death looked to be the inevitable result; she was sinking as rapidly, apparently, as any one could. The dyspnœa was very great; pulse 65, low, weak, and wiry; there was profound stupor. She inclined to lie upon her back, with the limbs as cold as marble, and a little paralyzed; there was some little trismus, though medicine could be swallowed with some difficulty. The color of the face was natural; its expression that of repose, of tranquillity; only the muscles were a little tightened upon the bones of the face, but not like those of a phthisical patient, or of a person dying from acute gastritis; it was rather the look of a person in full health, who rests after excessive fatigue. The treatment pursued during the paroxysmal stage consisted mainly of the diffusible stimulants in very large quantities. Mustard applications were applied to the extremities; for the dyspnœa hot flannel cloths, and a solution of ammonia muriate applied to the thorax externally. After a period of no great length of time, a general sweat broke out upon the surface, the patient executed some movements of the hands and feet; the eyelids were elevated; the eyes remained fixed and widely open; she remained for a long time unconscious of what passed about her; she recovered, by degrees, the use of her senses, and finally all the functions resumed their natural play. As soon as deglutition could be accomplished without difficulty, I began giving twenty-five grain doses of quinia sulphas every four hours. Also the same prescription as above, to be given in teaspoonful doses every five hours.

On the 28th, 11 o'clock A. M., found patient resting comfortable; had slept well during the after part of the night; bowels in a good condition; kidneys normal; urine not so high-colored as before; pulse 79, and strong; temperature 95° in axilla. She complained of pain in the head, of greater severity than common; this I attributed to the effects of the quinine; her skin was moist and of a more healthy character; appetite much better than it had ever been. The treatment pursued consisted of about the same as the day before.

At 7 o'clock, P. M. patient was resting well; all the symptoms were of a favorable character; felt a little nausea at times at her stomach; pain in the head about left her. All the symptoms taken together, I considered her in a fair condition to get well. The treatment after this was strictly a tonic one. Ever since she has been slowly convalescing.

The great point of interest in this case is the steady progress of the hidden malarial poison towards death. By degrees the power of life slowly fades away, by the toxic influence upon the vitals of man; nothing within the field of medical science affords a greater scope for study, than this action upon the animal economy. The poison lies in the system, oftentimes when the physician is satisfied that he has succeeded in eliminating it; we are often aroused to a sense of our duty by its deceitful action; instantly, as it were, the flames are rekindled; the patient is brought again under the baneful influence which it has upon the body.

A CASE OF PAPILLARY GROWTH ON THE MUCOUS MEMBRANE OF THE VAGINA.

BY W. W. CROOK, M. D.,

Of Laramie City, Wyoming Territory.

Mrs. G., æt. 19, residing in Kansas, applied to me October 4th, 1874, for examination and treatment. She gave me the following history of herself and disease, viz:—"I was married last January; before I was married I menstruated regularly, and always enjoyed good health. I think I am in my sixth month of pregnancy. About six weeks ago I felt a kind of roughness, like little tumors, in my vagina; they grew so fast I became alarmed about them; they, or something else, would sometimes bleed quite considerably; there is a constant slight discharge, resembling leucorrhœa. I feel no pain of consequence, but I easily get tired, and am not so strong as I was two weeks ago."

These were about the words she used in giving the case; she further stated that her husband had been often attacked with gonorrhœa, and she suggested to me that such a diseased condition on the part of her husband might have something to do with her trouble; a suggestion that I at once acquiesced in; and now, having her history, I proceeded to make a more

extended vaginal examination. I attempted to use an ordinary glass-coated speculum, but at once found it impossible, on account of the vagina being entirely filled with a growth, that I at once recognized as papillary tumors. They were growing all along the mucous membrane of the vagina, and had completely filled that organ to its utmost capacity. I at once gave my patient an anæsthetic, and proceeded to remove them in the following manner: I prepared myself with a pair of ordinary polypi forceps, scissors, scalpel, argent nitrate, etc. I removed them as I came to them, and to my surprise, I found there were, in all, eighteen different growths, some of the largest weighing as much as six drachms. There was considerable hemorrhage, but when I removed one of the growths, I would sponge the cut surface, and cauterize it freely. These growths would start from the mucous membrane in a small, round, cord-like stem, and seem to spread out like a cauliflower growth, at the top of which they would measure as much as from one inch to an inch and a half in diameter; while at the base they would only be one-half inch or less; they were very red and deeply papillated.

My patient recovered promptly, and at the end of her gestation, gave birth to a fine, healthy male child. My patient is a lady of good reputation, but her husband being an old subject of gonorrhœa, did his diseased condition have anything to do in creating papillomata of the vagina in his wife?

Medical Societies.

OHIO STATE MEDICAL SOCIETY.

(Reported by J. W. Hadlock, M. D.)

Railroad Locomotor Ataxia, with Cases.

BY W. J. SCOTT, M. D.,

Of Cleveland, Ohio.

I have observed, carefully, a few cases of a peculiar condition in railroad men, which I have not seen very well described anywhere.

Case 1. Mr. ——, an old railroad conductor on the Columbus road. Ten years ago he gradually became affected with these symptoms: His digestion became bad; he lost strength; he had palpitation of the heart; urination was not easy on the train when in motion. He began to notice that he could not get on and off the train with his accustomed ease. He began to feel more or less insecurity in his steps, and a little later the feet seemed slightly numb, and he had pain in the back, and pain in the lower extremities. He had now, unsteadiness in his step, with a sensation of vertigo, and he, for a long time, could not walk well unless he looked at his feet. With all this he continued at his post on the road. He had consulted his physician, who treated him with little pills, for three years, without advantage. He then consulted another man, who would cure him by electricity. He accordingly gave him a strong application of the interrupted current, which was followed by congestion of the spinal cord, from which the patient suffered acutely for some days, and from the effects of which he never recovered. In this condition I saw the man first, as a patient. He came out of this acute attack with motion and sensation more interfered with than previously. Afterwards he had to use a stick in locomotion; these functions became more and more at fault until he had to have two sticks, and then had to have the assistance of a second person to walk, and now he is unable to walk by any amount of assistance, and yet he lives. He has now that condition which Trousseau describes as locomotor ataxia, or sclerosis.

Case 2. C. W., a heavy man, conductor on the Fort Wayne and Pittsburg and Chicago Railroad, consulted me in 1868. He had disurea, palpitation of the heart, indigestion; was unsteady on his feet; could not remember as well as formerly; stricture around the thorax; pain in the back. I gave an unfavorable prognosis, and advised him to quit railroading. He said he could not do it. He consulted medical men in Philadelphia, Chicago, etc., and died within two years.

Case 3. W. C., of Pittsburg, a conductor of freight on P. F. C. Railroad; a tall, spare man, weight 160 pounds; dark complexion, temperate, good habits; had been sixteen years on the road. For the last six years had been complaining. I saw him in November, 1872. He had been under the care of his physicians in Pittsburg for three years previously. The first one to whom he applied treated him eighteen months, for indigestion and liver complaint, without advantage. He then consulted another, who prescribed for him for nine months, and no advantage gained. When I first saw him I found these symptoms: he was yet at work; had progressively become debilitated, with bad digestion, torpid condition of the bowels, nervous pain between the shoulders and tenderness along the spine, stricture around the thorax, palpitation of the heart on slight exertion, urine full of lithates, loss of strength, and emaciation gradually going on. He could not remember as well as formerly; was sensible of not being perfectly secure on his feet, but had control of locomotion by paying attention to it; but if the attention was divided, he became more sensible of want of perfect control of muscular movements, or when walking, if he should look off to either side, at once he became unsteady. With these symptoms I found him. With my diagnosis he returned to his former physicians in Pittsburg, who disagreed with my views of the case. He then consulted a gentleman of Philadelphia,

who, after a careful examination, thought that probably my diagnosis might be correct, but said the case was an obscure one. The gentleman returned to me with the views and the notions of these gentlemen.

In the spring of 1873, saw Mr. M. P., who had been on the C., C. & C. Railroad for sixteen years, in almost every capacity, but a part of the time a locomotive engineer; complaining with very nearly the same symptoms of W. C., I put him off the road, as one condition of treatment. In two months he so far recovered that he thought he could resume work again as conductor of freight. I forbade his return, as he valued his life. He is now at work for the company in another capacity, and enjoying tolerable health.

Mr. P. L., was another old engineer of the same road, who, for a number of years, was afflicted with disurea, when on the engine, in motion, and had slight numbness of his hands and feet, and could not get on and off the engine very easily, yet, when at his post, could run the machinery as well as any one. He was an intemperate man, and failed rapidly at last.

Looking to the authorities for an interpretation of these cases—and I could add others, but these are sufficient—I find the best account in Trousseau's Clinical Lectures on Locomotor Ataxia. None of his cases are similar to these in symptoms, for the reason that he begins his description of the case when there was present already sclerosis, and the preliminary stages had been passed through. Trousseau quotes his definition from Duchenne (de Bouloyne): "Progressive abolition of the faculty of coördinating movements, and apparent paralysis interfering with the integrity of the muscular power." Evidently this definition takes the disease in the middle; and the long course of symptoms and conditions in the first stages are overlooked.

Again he says: "If you ask an individual suffering from ataxy to walk, he staggers, makes great efforts to maintain his equilibrium, and, feeling that his muscles do not respond to the influence of his will, he seeks for a point of support." In all of his masterly discussion of this grave and interesting disease, he overlooks the first stage, so that the time for treatment is wholly past before he comes to it.

The cases from which he obtained his pathological anatomy were entirely different from mine, and I think it possible that their conditions might be different. In his cases of dissection the disease had been induced by sensual and venereal excesses; and, consequently, the great pathological changes found were in the sensory nerves and column of the spine, reaching the brain in this way. The description of the cases is not sufficiently minute to tell us whether the sensory or motor function was first interfered with. In the cases that I am reporting the motor disturbance was first at fault. It seems to me, long before any disturbance of sensory or motor function was a noticeable feature in the nervous phenomena, there were, evidently, symptoms depending more on nervous conditions than on any other physiological or pathological condition. The disturbance of the digestive function and of the heart's action have their exciting cause in disturbed nervous influence, through the relation of the vaso-motor set of nerves, or the great sympathetic set of ganglia, not because they are primarily affected, but by their relation with the spinal ganglia, whether we have the anterior or posterior column affected. In this railroad disease these symptoms will follow the disease of either column of the cord; and, indeed, all parts of the cord will speedily become seriously affected.

If you place a man on his feet in a car, and keep him so for a long time, at first he becomes tired by the constant attention to keep his muscles guarded, so as to meet at all times the liability to sudden changes in the centre of gravity. This extra amount of muscular tonicity must be kept up through the motor set of nerves. It seems to me that the spinal ganglia, thus continually taxed, would present, first, functional derangement. And when this becomes considerable, that their connection with the other ganglia may cause them to manifest the symptoms depending on hyperæsthesia of all the ganglia; or, after a long time, those depending on a want of nutrition; or, at a still later period, the exciting cause continuing, such as a total obliteration of function, and we approach the condition which authors describe as "ataxy." On the other hand, it may be said that intelligence of these facts is communicated to the sensorium through the sensory ganglia, and hence they are both alike taxed at the same time.

It seems to me that the stronger power is required of the motor apparatus. Take the cases referred to by Trousseau, in which a like condition has been produced by frequent and continued sensory excitation, and the pathological anatomy is found in the root of posterior nerves and those ganglia reaching to the brain; thus affecting all the ganglia, spinal, sympathetic, sensorial, and perhaps cerebral, and in this way destroying, ultimately, the power of coördination, and, in the end, producing sclerosis, the pathological anatomy of which can be easily demonstrated; but the same cannot be said of that long series of first symptoms, neither by the scalpel nor the microscope; and yet they have as distinct and no less important a pathology as "sclerosis," and are the precursors of it. Now, add to these disturbing causes the divided attention of a locomotive engineer. He must attend to the condition of his machinery, watch for signals, and see that the track is clear, while the train speeds its way. The great wonder is that more of this class do not fail.

The treatment is the important part of the subject. The early recognition of the premonitory symptoms is the only safety for the patient. After the organic changes are wrought *certainly* any treatment is useless, which, I judge, is Robert's opinion. He describes the

disease well, and stops at that. Trousseau and Duchenne treated their cases, as they saw them, unsuccessfully. And so will we, if we do not recognize the condition until it is in the last stage. But if we look on the indigestion, the palpitation of the heart, the want of the accustomed quickness of perception, the slight failure in the memory, the inability to urinate when the train is in motion, the inability to direct the motion of the limbs without watching them, the numbness of hands, and sometimes the feet—with some of these conditions, tolerably well marked, especially in a railroad man—we may be certain that they are unfailing signs of serious trouble, and in the general management of these conditions the only safety is for the patient to quit at once his business. If he continues, no treatment will be of any avail, but a worse set of symptoms and conditions, which are more grave in character, will in time be developed.

Now, to meet the therapeutical indications, the importance and cause of the early symptoms must be appreciated. Flint says that "the treatment will require but a few words. There is no special plan of medication as yet established. Some benefit may be derived from the *judicious* use of electricity." Trousseau says, "the persevering use of sulphur baths has proved useful. Wunderlich advocates the use of nitrate of silver as a curative agent.

It seems to me that this kind of therapeutics is remarkably deficient for the treatment of so grave a set of symptoms. Take the symptoms as they present themselves in the stages of the disease, and usually we find that the indigestive disturbances are the first symptoms the afflicted complain of. Remedies directed alone to this function will not accomplish much for relief.

The cause of the disturbance is a nervous one, and comes from the disturbed condition of the sympathetic ganglionic system. These ganglia will be readily disturbed, whether disturbance, primarily, be in the anterior or posterior column of the cord. It is known that the ganglia of the three sets of nerves are intimately associated, and beautifully and wisely connected one with the other. A disturbance of the origin of the pneumogastric will at once be reflected on the heart and stomach, and in that way we have these two important functions almost simultaneously affected In railroad ataxia the apparatus whose function is to keep up tonicity of muscles will be continually taxed. and, in addition to this, the constant guard kept over the muscles, so as to prevent accident, it would seem to me most likely to become affected. when we take into account the continual motility of this function by reason of the continual attention which must be manifest through the motor nerves. The symptoms manifesting themselves in these cases are those which would come from motor disturbance first, and afterwards those of sensory apparatus become affected; in either case we have the sympathetic system affected about equally alike.

If anything like this is the pathogeny of this first stage, and while there is possibly no organic lesion, the therapeutical indication certainly is plain, to avoid the cause which has led to such condition. That is the important part of the treatment which, in my experience, has been wholly neglected, both by the physician and the patient. If we see the case in the stage of hyperæsthesia of the centers, counter-irritation is advisable, with such remedies as control the circulation of the cord—belladonna, hyoscyamus, stramonium, tincture of cantharides and ergot, bromide of sodium, bromide of potassium, bromide of ammonium, and after this stage is past, and we have the changed nutrition and a failure of nervous power, to these may be added strychnia, or the preparations of nux vomica, which I believe to be better than the strychnia. For the heart symptoms, I would combine with the above, in all stages, digitalis, in moderate dose, and if there is anemia, occasionally a little iron. With this class of remedies, I have seen several cases so much improved as to be able to attend to business. But sometimes it is impossible to accomplish anything in the treatment.

In the last stage, as described by Trousseau and Duchenne, where evidently there is already organic change of structure, no treatment is or can be of any advantage. When we get sclerosis of the cord, whether it is posterior or anterior, it makes no difference, and the patient ought to be told so, and let him accept the situation and save his money from the hands of quacks, springs, and water-cure establishments.

Editorial Department.

Periscope.

British Association for the Advancement of Science—Papers Read Before the Department of Anatomy and Physiology.

Through the kindness of a correspondent we have been supplied with the following abstracts of papers of medical interest which were read before the Association at its meeting at Bristol, August 26–31.

PHYSIOLOGICAL ACTION OF LIGHT.

The report of a committee appointed at the meeting at Bradford, in 1873, to investigate the physiological action of light was read by Dr.

J. G. McKendrick. The members of the committee were Prof. Balfour, Edinburgh; Prof. Dewar, Cambridge; and Dr. McKendrick, Edinburgh. The investigation was begun by Professor Dewar and Dr. McKendrick about three years ago, and a paper on the subject was read at the Bradford meeting, when the committee was appointed and a grant of £25 made to assist in carrying on the investigations. The results arrived at by the committee are as follows:—1. The impact of light on the eyes of mammalia, birds, reptiles, amphibians, fishes, and crustaceans, produces a variation amounting to from three to ten per cent. of the normal electro-motive force existing between the surface of the cornea and the transverse section of the optic nerve. 2. This electrical variation may be traced into the brain. 3. Those rays that are regarded as most luminous produce the largest variation. 4. The electrical alteration is due to the action of light on the retinal structure itself, as it is independent of the anterior portion, eliminating, therefore, the natural supposition that the contraction of the iris might produce a similar result. It is possible by experiment to discover the physical expression of what is called in physiological language "fatigue." 5. The method employed in this research may be applied to the investigation of the special organs of the other senses. One of the principal difficulties in arriving at the exact relation between the electrical variation and lights of different luminous and color intensity was the continually diminishing sensibility of the retina to the stimulus, owing to the abnormal condition of the eye when separated from the body and deprived of blood. This difficulty was overcome by placing the animal under the influence of woorara or hydrochlorate of chinoline, both of which substances deprived the animal of sensation and motion; thus experiments can be made upon the living eye without removing it from the body or in any way injuring the animal. It was found that on applying the electrodes of the galvanometer to the cornea and to the surface of the skin large deflections were obtained, sensitive to light, and showing a remarkably constant alteration. In the early part of the investigation it was found that sometimes the initial effect of light was to produce an increase, and at other times a diminution, of the natural current circulating through the optical apparatus; but no explanation was then offered as to the cause of this apparent anomaly. It has now, however, been demonstrated, by a large number of experiments, that the variation is related to the primary direction of the current. If, for instance, the cornea be positive to the surface of the brain the initial effect of light is an increase; if, on the other hand, some portion of the brain be positive to the cornea the initial action is a diminution of the natural current, thus showing that the current superadded or induced by the action of light is always in the same direction, only in one case it is added to, and in the other subtracted from, the natural current. The committee have also examined the action of polarized light and of the various colored rays of the spectrum, with the result of showing that in all cases the yellow rays produce the greatest effect. They have also found that the extreme violet rays and the low red rays produce no alteration. The committee then attempted to measure accurately the electro-motive force of the living eye. This they did by means of Mr Latimer Clarke's method of the comparison of electro-motive forces. From a large number of observations it has been found that the electro-motive force of the nerve currents dealt with in these experiments on the eye of the frog amounts to about 1-350th part of a Daniel's cell. This was compared with the electro-motive force of the muscle and nerve of the frog: the muscle gave about 1-35th, while the nerve gave 1-480th part of a Daniel's cell. Lastly, the committee have recently made a series of elaborate experiments, by means of an instrument called a chronograph, devised by Reignault, as to the time required for the action of light upon the eye of the frog. It has been found to occupy about 1-10th of a second, thus remarkably agreeing with the conclusions arrived at by various Continental physiologists as to the time occupied by the action of light on the human eye. The result of this investigation shows that the electrical variation observed in the action of light is what occurs in the eyes of all members of the animal kingdom.

MICRO-PHOTOGRAPHS.

Mr. H. B. Brady exhibited a series of micro-photographs, chiefly from physiological and pathological preparations, taken by a new and simple process, devised by Mr. Hugh Bowman, of Newcastle. The apparatus was also shown and described. It consisted of a simple mirror of speculum metal, placed at an angle of 45 degrees in front of the eye-piece of the microscope, and directed downward. The image was received upon a collodium plate set in the frame of a common photographic camera, and the photograph taken in the usual way. About 11 seconds was stated to be a sufficient exposure for the purpose.

The President, while admitting the utility of the invention, said that some difficulty would arise in its practical application, since in looking at a preparation it was often necessary to to move the focus from point to point, in order to obtain a complete examination.

ON VASCULAR PLEXUSES IN THE ELEPHANT AND SOME OTHER ANIMALS.

A paper on this subject was read by Mr. E. C. Miall. It related to the physiological significance of certain plexuses of vessels in the elephant, as illustrated by some dissections undertaken by Mr. Miall and Mr. Greenwood.

PROTOPLASM AND ADIPOCERE.

A paper was read by Dr. J. Goodman, on "Protoplasm and Adipocere, or the origin and

ultimate termination of animal structure." The author endeavored to show that the animal body, with all its complex organs and seemingly dissimilar structures, is formed either of corpuscles or fibrinous material, which alone can be denominated the true protoplasm of the body; and that dead animal matters are capable of resuscitation by contact with water, so that they will form corpuscles. Thus an individual suffering from disease and taking no nutrition may be sustained for weeks by the mixing of the effete matters from the frame with the aqueous fluid drawn by the absorbents.

VEGETARIANISM A CURE FOR INTEMPERANCE.

Mr. C. O. Groom Napier read a paper upon this subject. He said that more than twenty years ago he read, in Liebig's "Animal Chemistry," how the use of cod-liver oil had a tendency to promote the disinclination for the use of wine, and how most people found that they could take wine with animal food, but not with farinaceous or amylaceous food. He was at that time a vegetarian, and he felt in his own person the truth of this statement of Liebig, as did also some members of his family who, after becoming vegetarians, had no inclination for alcoholic liquors, although brought up to their moderate use. He was induced thus to inquire whether vegetarianism might not be a valuable cure for intemperance. Having applied it successfully to twenty-four cases, he would briefly give the results. One person, aged 61, of a Scotch aristocratic family, had contracted habits of intemperance in India. His habit was to eat scarcely any bread, fat or vegetables. His breakfast was mostly salt fish and a little bread; his dinner consisted of joint and very little else; and he consumed during the day from a pint to a quart of whisky, and was not sober more than half his time. He was induced to return to the oatmeal porridge breakfast, and adopt a diet for dinner of which boiled haricot beans or peas formed an important part. About this time his wife became so alarmed as to the consequences of the cattle plague that all the family were put upon a vegetarian diet. The husband grumbled very much at first, but his taste for whisky entirely disappeared, and in nine months from the time he first commenced eating largely of beans, and two months from the time he became an entire vegetarian, he relinquished alcoholic liquor entirely, and had not returned to either flesh or alcohol. The author also instanced the case of an analytical chemist, aged 32, who was given to intemperance, but who, on having his attention drawn to Liebig's statement, was induced to adopt a vegetarian diet, and, following up this, before six weeks he was a total abstainer. As other instances, he mentioned a lady of independent means, a clergyman, a country gentleman, a girl of 19, a man and his wife and sister (all over 40 years of age), a bed-ridden gentleman (cured in 36 days), a captain in the merchant service, a half-pay officer, a clergyman and his wife, both of intemperate habits, who were cured by a diet mainly farinaceous. A gentlemen of 60 had been addicted for thirty-five years to intemperate habits, and his constitution was shattered. After an attack of delirium tremens he was induced to adopt a farinaceous diet, which cured him in seven months. He was very thin, but his weight increased 28lbs. Two sisters, members of a family noted for intemperate habits, adopted vegetarianism, and were cured in about a year. A clerk who had lost several situations through intemperance was cured by vegetarianism, and was taken back by an employer at a higher salary than he had ever received. A governess, aged 40, lost her situation through intemperance, and was cured, by adopting a farinaceous diet, in nine weeks. Two military pensioners were cured in six months. Three old sailors were cured in like manner in the same period. The author then mentioned various articles of diet which he regarded as specially antagonistic to alcohol. These were: macaroni, haricot beans, green dried peas and lentils, soaked for twenty-four hours, well boiled with onions and celery; rice, and highly glutinous bread. The author stated that he had himself found his health benefited by a vegetarian diet, and all whom he had induced to adopt it had received similar benefit. After pointing out the increased economy of this diet, he recommended those who had a distaste for it to try seaside or mountain air. He then alluded to the increase of national wealth which would arise from the employment of land now growing barley for other purposes; and added that nations living on a farinaceous diet are less given to drunkenness than meat-eating populations.

The President, Professor Cleland, opened the third session with an address, in which he touched upon the doctrine of evolution. The importance of the subject, the freshness of his views, and his eminent authority as an anatomist, induce us to make the following rather long extract on

THE FORMATIVE FORCE IN EVOLUTION.

The doctrine of natural selection starts with the recognition of an internal formative force which is hereditary; and in the development of the doctrine, the limits of hereditary resemblance have been greatly studied; and further, it will be observed that one of the fundamentals of the doctrine is, that the formative force alters its character gradually and permanently when traced from generation to generation in great tracts of time. Now I am not going to enter on a threadbare discussion of the origin of species in this company; suffice it to say that, while the existence and extensive operation of such a thing as natural selection seems to have been convincingly proved, it is a very different thing to allege that it has been the sole, or even the principal, agent in producing the evolutions of living forms on the face of the earth. So far as anatomy is concerned, it is a secondary matter whether the link between the members of the evolving hosts of life had been genetic or not.

But I wish to point out that, even pushing the Darwinian theory to the utmost possible extreme, the action of external agents infers the existence of something acted on; and the less directly they act, the more importance must be given to the hereditary or internal element. We are therefore presented with a formative force, which exhibited itself in very simple trains of phenomena in the first beginnings of life, and now is manifested in governing the complex growth of the highest forms. We are set face to face with that formative force, and are obliged to admit its inherent capability of changing its action; and that being the case, is it more of an assumption to declare that the changes are all accidental and made permanent by accident or external circumstance, or to consider that it has been the law proper to this force to have been adequate to raise forms—however liable to modification by external circumstances—to raise them, I say, from the simple to the complex, acting through generations on the face of the earth, precisely as it acts in the evolution of a single egg into an adult individual? This is that formative force which has been elaborately shown by Mr. Darwin, in launching his theory of "pangenesis," not only to be conveyed through whole organisms and their seed, but to pervade at all times the minutest particles of each; and I merely direct attention to the fact that its extension over the whole history of life on the globe must be granted, and ask if, in the range of forms which furnish at the present day an imperfect key to the ages which are past, there is not exhibited a development comparable, in its progression to definite goals, with what is shown in the life of a single plant or animal. For my own part, I am fully convinced of a unity of plan running through animal forms, and reaching, so far as the main line is concerned, its completion in the human body. I confess that I think there is evidence that animal life has reached its pre-ordained climax in humanity; and I cannot think it likely that, as myriads of years roll on, descendants differing *in toto* from man will be developed. To argue the subject would be to enter on the largest subjects of morphological anatomy, and on speculations on which agreement could not be expected. Even, however, in the nature of the variations in the human race, there seems to be some evidence that the progress of evolution is to be traced from man, not to other animal forms yet to appear, but, through his physical nature, into the land of the unseen. Those variations, keeping out of view differences of bulk and stature, which appear to have some relation to geographical position, are principally to be found in the head, the part of the body most closely connected with the development and expression of the mental character, and I may mention that when, some years ago, my attention was directed to the variations of the skull, the only part whose variations in different races I have had opportunity of studying with any degree of minuteness, I became satisfied that in uncivilized races there might be distinguished skulls which had undergone hereditary degeneration, others which had reached the most advanced development possible for them, and a third set, notably the Kaffirs, with large capabilities for improvement in the future. Indeed, it is beyond doubt that there is a limit for each type of humanity beyond which it cannot pass in the improvement of the physical organization necessary for mental action. There are also some curious indications in human structure of the formative force nearing the end of its journey. In the details of the skeletons of other animals one sees the greatest precision of form; but there are various exceptions of this neatness of finish in the skeleton of man, and they are found in parts specially modified in connection with the peculiarities of his development, and not requiring exactness of shape for physiological purposes; while, on the other hand, physiognomical mould and nicety of various physiological adaptations are found in perfection. Look at the variations in the breast-bone, especially at its lower extremity, which is never shapely, as it is in the lower animals. Look at the coccygeal vertebræ; they are the most irregular structures imaginable. Even in the sacrum, and in the rest of the column, the amount of variations finds no parallel in other animals. In the skull, except in some of the lowest forms of humanity, the *dorsum sellæ* is a ragged, warty, deformed, and irregular structure, and it never exhibits the elegance and finish seen in other animals. The curvature of the skull and shortening of its base, which have gradually increased in the ascending series of forms, have reached a degree which cannot be exceeded; and the nasal cavity is so elongated vertically, that in the higher races nature seems scarcely able to bridge the gap from the cribriform plate to the palate, and produces such a set of unsymmetrical and rugged performances as is quite peculiar to man; and to the human anatomist many other examples of similar phenomena will occur.

ON SOME PHYSIOLOGICAL EFFECTS OF VARIOUS DRINKING WATERS.

Mr. W. J. Cooper read a paper on this subject, in the course of which he detailed a number of experiments of M. Papillon on various animals, with a view to test the action of certain phosphates given in distilled water on the bony structure of those animals. The author added: The full importance of these experiments does not seem to have been fully appreciated. It is not only shown that the food which is eaten affects the composition of the bones, but that mineral matter in dilute solution is capable of being assimilated. The experiments are, in fact, experiments on different kinds of artificial drinking waters, and illustrate how profoundly the bodies of animals are influenced by the mineral constituents of the water which they drink. They seem to show that the effect of altering the composition of the water supply of a community might involve questions of vast

importance to the organic structure of the human body, if the very composition of our bones is affected by the quality of the water. If the water contains lime, lime would be taken up, and would appear as phosphate of lime in the bones; if strontia, as phosphate of strontia; if magnesia, as phosphate of magnesia. If by any combination of circumstances these salts should be deficient, the bones would be imperfectly supplied with mineral matter. It is said that such instances have occurred in Holland, in districts where the inhabitants can only obtain rain water for drinking purposes. This fact, probably combined with an absence of lime in their food, occasions a softening and distortion of the bones of the body. By varying a water supply it might be possible to alter the physical organization of a population, and in future ages, from the examination of the bones of bygone generations, the character of the water they were in the habit of drinking might possibly be deduced. So much attention is now directed to organic impurity in drinking water (a defect which can be completely remedied by careful filtration) that the inorganic impurities have been almost overlooked, although there are numerous instances where serious consequences have arisen from the incautious use of deep spring waters. If the entire organic structures of the human body are liable to alteration when excess of mineral matter is introduced into the system, it is essential that health-seekers at these medicinal springs should place themselves under medical supervision. And one of the first considerations in the inauguration of a water supply should be to insure a perfect freedom from excess of any mineral except those comparatively harmless ingredients —chloride of sodium and carbonate of lime.

THE MORTALITY OF ADOLESCENCE.

Dr. John Beddoe read a paper containing some curious statistics on the mortality of adolescence. One remarkable fact brought forward was the excessive mortality in males of the upper and middle classes, between the ages of 18 and 24, and of females between 12 and 16. In the former he attributed the excess partially to competition and the strain to get a footing in life; and in the latter partially to the want of care, at a critical period, necessary to boarding school girl life.

INTESTINAL SECRETION.

A second report was presented by the Committee on Intestinal Secretion—Dr. Brunton and Dr. Pye Smith. The report detailed a number of experiments which the committee had undertaken, and which were considered to prove the absence of influence on intestinal secretion through the splanchnic nerves, the pneumogastrics, the sympathetic above the diaphragm or the spinal marrow; and the probable influence of the ganglia contained in the solar plexus, though certainly not of the two semilunar ganglia exclusively. Also the independent occurrence of hemorrhage and of paralytic secretion appeared, in the view of the committee, to point to a separate nervous influence on the blood-vessels and the secreting structures of the intestines.

THE ORIGIN OF THE LYMPHATICS.

A paper on this subject, by Dr. George and Dr. Frances Elizabeth Hoggan, on "The Origin of the Lymphatics," was read by the latter, and a large series of camera lucida drawings, illustrating the subject, were subsequently described by the former. The paper was merely offered as a preliminary abstract of what could be said on this very abstruse subject; and the authors claimed to have discovered those "ultimate radicles" of the lymphatic system which so many histologists are at present seeking with the greatest skill and patience. Special reference was made to the lymphatic radicles in voluntary muscles of mammals, in involuntary muscles of batrachians, in the skin of fishes; and to the development and condition of lymphatic radicles and of lymphatic sinuses.

THE ANATOMY OF THE SKIN.

A paper was read by Dr. Martyn, entitled "Some New Researches on the Anatomy of the Skin." The object of the communication was to make known some facts in the anatomical structure and growth of the cuticular layer of the skin. In a recent paper the author had described this with reference to disease, and he now had to confirm the view which those appearances led him to predict, as holding good for ordinary and healthy epithelium also. Twelve years ago, Max Schultze observed that the lowest of the cells forming, in many layers, the cuticle, were often covered with spines or grooves. His brother confirmed this in fishes, and other observers had done so in many diseases of the skin. The subject attracted little notice, and had scarcely even now reached our English text-books. It was in endeavoring to make out the real nature of so strange a structure that Dr. Martyn, by the employment of unusually thin sections, staining, and the highest available powers of the microscope, had discovered that the cells which appeared "spinous" or "echinate," when isolated from their connection, if they could be at any time seen in single layers, were simply united together by delicate bands. These are so constantly seen broken across that they assume the form of tubercles or "prickles." As repeated observations confirmed this, the name "conjoined epithelium," had been proposed for this form or stage in the cell life. These observations, of which drawings were engraved in the number of the monthly *Microscopical Journal* of the present month, were made on cancer of the skin, in which the cells, fortunately, become monstrous. Dr. Martyn was in a position to say that the conjoined epithelium was also to be found in (1) human skin; (2) the front of the eye in the pig; (3) the lips of at least one fish (zeusfaber). The sturgeon was just now under

investigation. The difficulty of making the structure clear, in a healthy animal cuticle was (1) the intense cohesion of those very cells, so that in trying to stretch, one usually breaks the uniting bands, (2) the necessity for using a high power, the one-twelfth from 800 to 1000 diameters being required to make sure of the nature of the bands. The interest of the subject lay in this direction. All the cells of which living things at any moment consist, were produced by division of a parent either into two equal parts (fissiparous), or by budding off a small bit (gemmiparous). Epithelial cells grow so too, and, in "conjoined" epithelium, we, so to say, catch the division process lingering on. Many cells divide like an hour glass, but here the points are very numerous. Protoplasm, of which cells at first consist, varies constantly in form, as the amœba, or the white blood cell While alive, in a formative sense, it moves. The old outer firm wall, or shell of matter which forms around cells, and which is called cell-wall, has ceased to have this formative life, whatever functional powers it may have. Cells of many striking shapes are found in the organic world, star shaped, spindle shaped, caudate, and so on. In the early discoveries of cell growth, innumerable mysterious vital powers were attributed to cells, amongst which was that of projecting processes, long wandering arms pervading intercellular tissue, or other structures. As Dr. Martyn endeavored to show some years ago, the form of the cell is almost invariably the result of ordinary force. It is a form which the cell is forced to take by the dragging out of the points at which it was in the act of dividing. This idea is now a familiar one, and the conjoined epithelium is a good illustration. A good subject for investigation would be those cases in which cells are covered with ciliary processes, probably from splitting of hardened and formed outer material.

ON THE PHYSIOLOGICAL ACTION OF THE CHINOLINE AND PYRIDINE BASES.

A paper on this subject, by Dr. J. G. M'Kendrick and Professor Dewar, was read by the former gentleman. The following is an abstract:—"It is well known that quinine, cinchonine, or strychnine yield, when distilled with caustic potash, two homologous series of bases, named the pyridine and chinoline series. Bases isomeric with these may also be obtained by the destructive distillation of coal, or from Dippel's oil, got from bone. Greville Williams has pointed out that chinoline obtained from coal-tar differs in some respects from that yielded by cinchonine. In this research the authors endeavored to ascertain (1) the physiological action of the various members of the series; (2) whether there was any difference in this respect between the members of the series obtained from cinchonine and those got from tar; and (3) whether, and if so, how, both as regards extent and character, the physiological action of these bases differed from that of the original alkaloidal bodies. The bases in both series are difficult to separate from each other; but this has been done, as far as possible, by repeated fractional distillation. The salt employed was the hydrochlorate. This, dissolved in water, was introduced by a fine syringe under the skin of the animal. The action of chinoline was tested on frogs, mice, rabbits, guinea pigs, cats, dogs, and man; but as the effects were found to be similar in all of these instances, the majority of the observations were made on rabbits. The experiments with the other substances were made on rabbits and frogs. The physiological action of the hydrochlorate of chinoline was first examined. Its action was then compared with that of the hydrochlorates of the chinoline series of bases distilling at higher temperatures, including such as lepidine, dispoline, tetrahiroline, etc. In the next place, the physiological action of the pyridine series was studied, beginning with pyridine itself, and passing upward to bases obtained at still higher boiling points, such as picoline, lutidine, etc. Lastly, the investigation was directed to the action of condensed bases, such as dipyridine, parapicoline, etc.; and the effects of these substances were compared with those produced by the members of the chinoline series and among themselves. The following are the general conclusions arrived at:—

1. There is a marked gradation in extent of physiological action of the members of the pyridine series of bases, but it remains of the same kind. The lethal dose becomes reduced as we rise from the lower to the higher. 2. The higher members of the pyridine series resemble in physiological action the lower members of the chinoline series, except (1) that the former are more liable to cause death by asphyxia, and (2) that the lethal dose of the pyridines is less than one-half that of the chinolines. 3. In proceeding from the lower to the higher members of the chinoline series, the physiological action changes in character, inasmuch as the lower members appear to act chiefly on the sensory centres of the encephalon and the reflex centres of the cord, destroying the power of voluntary or reflex movement; while the higher act less on these centres, and chiefly on the motor centres, first, as irritants, causing violent convulsions, and at length producing complete paralysis. At the same time, while the reflex activity of the centres in the spinal cord appear to be inactive, they may be readily roused to action by strychnine. 4. On comparing the action of such compounds as $C_9 H_7 N$ (chinoline) with $C_9 H_{13} N$ (parvoline, etc.), or $C_8 H_{11} N$ (collidine) with $C_8 H_{15} N$ (conia, from hemlock), or $C_{10} H_{10} N_2$ (dipyridine) with $C_{10} H_{14} N_2$ (nicotine, from tobacco), it is to be observed that the physiological activity of the substance is, apart from chemical structure, greatest in those bases containing the larger amount of hydrogen. 5. Those artificial bases which approximate the percentage composition of natural bases are much weaker physiologically, so far as can be estimated by amount of dose, than the natural bases; but

the kind of action is the same in both cases. 6. When the bases of the pyridine series are doubled by condensation, producing dipyridine, parapicoline, etc., they not only become more active physiologically, but the action differs in kind from that of the simple bases, and resembles the action of natural bases or alkaloids having a similar chemical constitution. 7. All the substances examined in this research are remarkable for not possessing any specific paralytic action on the heart likely to cause syncope; but they destroy life either by exhaustive convulsions, or by gradual paralysis of the centres of respiration, thus causing asphyxia. 8. There is no appreciable immediate action on the sympathetic system of nerves. There is probably a secondary action, because after large doses the vaso-motor centre, in common with other centres, becomes involved. 9. There is no difference, so far as could be discovered, between the physiological action of bases obtained from cinchonine and those derived from tar.

Dr. McKendrick also described the physiological effects of various methyl and ethyl compounds of chinoline. He alluded to the researches of Professor Crum Brown and Dr. Thomas R. Fraser on the action of methyl and ethyl strychnia, as examples of a complete change in physiological action being produced by a change in chemical constitution. He and Professor Dewar had found the ethyl and methyl compounds of chinoline to have an action very different from chinoline alone They were found to be much more active than chinoline alone, and to produce effects similar to those of the higher members of the chinoline series. He then indicated the important considerations suggested by this investigation, and said it was not too much to anticipate that the chemist may yet be able to build up compounds having effects resembling those of such valuable remedies as quinine, morphia, etc.

Dr. Pye Smith said it was gratifying to find that so important a branch of science was being investigated by two such eminent men as Dr. McKendrick and Professor Dewar. Some of the bases to which reference had been made would no doubt prove useful medically and physiologically, especially in the latter capacity. With regard to cinchonine, he had made some experiments with it on the human frame, and he was led to the conclusion that the further it was kept from their patients the better it would be. It was certainly cheaper than quinine, but it had many objectionable characteristics. He was glad to hear of the promised advantage of chinoline, which, if realized, would help them out of the difficulties attending the administration of woorara to the mammalia.

The Bioplasm of the Brain.

In a late lecture the eminent microscopist, Dr. Lionel Beale, says:—

The very highest form of bioplasm, or living matter, in the world, is that which, as I believe, is concerned in mind, and this attains its highest state of activity not until the age when that part of the nervous apparatus concerned in mental operations has attained a high degree of elaboration. This period cannot be assigned with precision, for it differs in different races and in different individuals, but it is never reached until some time after growth has ceased, and every tissue and organ is fully developed. But it is certainly very remarkable that, as far as I am aware, those parts of man's brain concerned in the manifestation of his highest mental faculties constitute the only structures in nature which continue to improve for many years after the rest of the organism has attained its highest state of development. So also these, above all structures, are remarkable for continuing to improve although many tissues of the body may have been for some time undergoing deterioration and decay.

The anatomical elements which constitute the gray matter of man's brain are well known. Large angular cells, with fibres radiating from them, the longest fibre passing upward towards the surface, near which it divides and subdivides into multitudes of the finest and most delicate threads, which form, with fibres from other cells and other parts, an inextricable interlacement. In this situation, no doubt, all the operations of the mind are performed. But to explain what happens in connection with the structures demonstrated, when the instrument is in active work, is no easy task. From a knowledge of the arrangement and action of the structure, we ought to be able to form some conception, however rough, of what happens when an idea is formed and when it is expressed so as to be rendered evident to others. The facts of the case seem to demand a means by which the mind may act upon the elaborate system of nerve-fibres already referred to. We seem to require an instrument, and the means of acting upon different parts of the instrument as we may will.

It is not easy to conceive by what means the angular cells, which form such prominent objects in the gray matter, could will. That these are concerned in the formation of the fibres is certain, and it is possible that in them nerve-currents may originate, but it is very doubtful whether the bioplasm of these cells is the bioplasm concerned in thought. There are other bioplasm particles, and in enormous numbers, though they do not constitute such prominent objects as the angular or caudate cells. These are little spherical particles of bioplasm, many of which are smaller than a red blood-corpuscle, and are probably connected by communicating fibres of great delicacy. These bodies are situated near the surface of the gray matter, among the ultimate subdivisions of the excessively delicate nerve-fibres. It is to be remarked that in this situation the supply of arterial blood is more abundant than in any other part of the nervous system, and the particles of bioplasm in question, being naked and unenclosed in any cell-wall at any period of life, are just such

as we should expect would undergo rapid change. These are, I believe, the active agents which, by their movements, may act upon the delicate nerve-threads which ramify on all sides, in very close proximity to them. When we examine these particles of bioplasm after death they are spherical; but are we not justified in assuming that during life they may change in form, at least as much as a mucus-corpuscle or an amœba? The slightest alteration in form would influence the current traversing the nerve-fibres that were close to them. These delicate bioplasts are, I believe, during the waking state, continually undergoing changes in form. That in some situations they increase in number cannot be doubted, and it seems likely that collections might increase in extent, even long after the formation of the brain had been completed. What is very remarkable is, that these bioplasts retain their primitive characters throughout life.

I dare say few persons will be persuaded to believe that the bioplasts concerned in the highest mental acts of man are bodies not more complex than the lymph-corpuscle or the white blood-corpuscle; but, as I have before remarked, all evidence is in favor of the view that exalted function is not dependent either upon complexity of constitution or upon quantity of material. There are no differential characters to be demonstrated between different forms of living matter having widely different endowments, by which the peculiarities may be accounted for. There may be difference in power not dependent upon differences as regards matter and its forces. May we venture to conclude that *mind* is the form of *vital* power which, stirring in these particles of bioplasm, causes the movement of the matter of which they consist, and that thus the elaborate mechanism, slowly constructed and gradually brought to perfection, is influenced? If this be so, mind is the highest form of vital power which exists in nature, by which particles of matter are caused to move in a definite manner for a definite purpose.

Spina Bifida.

The London *Medical Times and Gazette* says: M. Laroyenne, of Lyons, having related, at the Société de Chirurgie, a case of spina bifida of the cervico-dorsal region, in a child three months old, which he had cured by means of the elastic ligature, M. Blot observed that these cases require very cautious treatment, as, in all the autopsies that have been made, branches of nerves, or the tissue of the cord itself have been found spread out on the walls of the tumor. Surgical operations in such cases must, therefore, be hazardous, and are the less called for, inasmuch as the tumor often disappears spontaneously, and is sometimes completely cured without any operation. M. Giraldès observed that such nervous expansions are not met with in spina bifida of this region, which may, therefore, be safely operated upon—although spontaneous cure may take place either by obliteration of the aperture of communication, or by fatty transformation of the contents. In the dorso-lumbar region this nervous expansion is observed, and operations there are very dangerous. M. Desprès observed that we may safely operate in cases in which the aperture is so narrow that the fluid cannot be returned to the canal by compression. Tumors which are easily reducible should not be meddled with. M. Hovel, however, has seen cases in which reduction of the tumor was impossible, although the orifice was large enough to admit a quill.

On the Treatment of a Common Cold.

Dr. J. M. Fothergill says, in the *Practitioner*:—

Rarely is any impression made upon the pyrexia until the action of the skin is excited and the cooling effects of exhalation attained. The administration of nauseant diaphoretics to attain these ends, has been the rule amidst practitioners and housewives. The time-honored antimonial wine has scarcely yet yielded to its rival, ipecacuanha, nor, perhaps, is it desirable that it should. Their combination is good and to be recommended. In adults, iodide of potassium in guaiac mixture forms an excellent combination, especially when the cold is combined with rheumatic pains, or tonsillitis. These internal remedies may be aided in their action by external measures, such as warm baths. With children it is easy to wrap them up in a blanket wrung out of hot water, to enclose them so wrapped in a dry blanket, and to put them into bed. This may be repeated as required, and sufficiently aids the remedies given by the mouth. Measures for giving adults a warm bath in bed are now to be procured at little cost. After perspiration is once induced, there is usually a gradual fall of temperature; but the normal may not be reached for some days. There is a decided tendency to excessive heat-loss after the action of the skin has been established, even though the temperature indoors be above the normal. Experience has taught humanity to wrap up well when passing through a cold, especially when it is breaking. Ere the action of the skin is re-established, the impression of external cold is grateful, but afterward chills are readily experienced. The increase of blood in the heat-losing area permits of rapid heat-loss. When a cold is caught during the restorative period it is usually a fixed one, and not rarely serious illness is the consequence.

When the action of the skin is re-established, it not uncommonly happens that perspiration is profuse, even while the patients wrap up well to shield themselves from heat-loss. This is a troublesome stage in the history of a cold. Here mineral acids with vegetable tonics are

indicated, and perhaps, best of all, dilute, phosphoric acid in cascarilla or cinchona. In the treatment of influenza, vegetable acids along with a bitter tonic should be given.

In the treatment of the bronchial affections which so commonly accompany an ordinary cold, it is not a matter of indifference what expectorant remedy is selected. As long as the skin is dry, and the bronchial lining membrane tumid, and secretion arrested, ipecacuanha with acetate of ammonia is indicated: or a little antimony may be added with advantage. When the skin is once thrown into action and the bronchial secretion also established, then acid with syrup of squills are suitable measures. But it is not a successful plan to administer squill with acids until the skin is moist. When there is a tendency to the free action of the skin, this latter combination in full doses is a useful plan of treatment. Neither is the union of carbonate of ammonia and senega, in severe cases, indicated until the secretion alike of the skin and the bronchial lining membrane is thoroughly established.

Spina Bifida Successfully Treated by Iodine.

Mr. Eate, of the Madras Medical Service, relates, in the *Indian Medical Gazette*, for June 1st, the case of a native male infant a month old. The tumor, the size of a large orange, was situated in the lumbar region, having its summit ulcerated. Although the child slept well, and took nourishment freely, it was emaciated, while the lower extremities appeared paralyzed and the sphincter ani enfeebled. A quantity of clear fluid was drawn off by a trocar and canula, leading to the collapse of the tumor, which, however, was not thoroughly emptied. Two drachms of a solution of iodine, successfully employed in a case by Dr. Watt, of Ayr (iodine, gr.x, iod. pot., gr.xxx, glycerine ℥j), were injected by means of an ordinary syringe, the solution being diffused over the sac by gentle manipulation. The aperture was closed by plaster, and a light lint compress was applied. By the following day the tumor had regained its original size and tension, but nothing was done beyond dressing the ulcerated surface. During the day it gave way over the site of the ulceration, much of the contained fluid escaping, and from that time slowly draining away. The tumor also became gradually reduced in size, and the ulceration healed, leaving a fistulous opening for about twenty-five days. At the date of the report, about five weeks after the operation, the tumor had become a firm mass, with a puckered appearance, about the size of a walnut, and upon which firm pressure can be made without causing crying. The child was much improved in health, and seemed to be recovering the use of its lower limbs. Mr. Eate believes that this is the fifth or sixth time this procedure has been resorted to, and always with success.

Reviews and Book Notices.

BOOK NOTICES.

Cyclopedia of Practical Medicine. Edited by Dr. H. Von Ziemssen. Volume x. Diseases of the Female Sexual Organs. By Professor Carl Schroeder. New York, William Wood & Co. pp. 576.

This tenth volume of the Cyclopedia appears in advance of the 4th-9th, for a reason stated by the publishers on an enclosed slip, to the effect that the volumes of the German edition are not being issued in regular succession—some of those treating upon subjects of greatest interest having the precedence, although numbered to conform to the plan of the entire work. It has been concluded to follow the same course with this translation; and in compliance with the expressed wish of many subscribers, Volume x, Schroeder's "Diseases of the Female Sexual Organs," is now published. Volumes iv and v will follow.

The present volume is taken up with Schroeder's work. It commences with directions for gynecological examination; diseases of the uterus; menstruation and its derangements; diseases of the fallopian tubes; diseases of the ovaries; diseases of the uterine ligaments and adjacent portions of the peritoneum; diseases of the vagina; and of the vulva. The translators are Drs. Paul F. Mundé, Leonard Wheeler, Edward W. Schaufler, J. Haven Emerson, W. L. Richardson and Edward B. Bronson. They have done their work carefully, and the volume will be found one of rare practical merit. The topic is well illustrated by designs on wood, and a bibliography, full for European authorities, scanty for American ones, is added to the articles. The terminology is not quite so complicated as some later writers have adopted, and the important point of treatment is well brought out. The volume fully equals its predecessors in merit.

THE

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A WEEKLY JOURNAL,

Issued every Saturday.

D. G. BRINTON, M. D., EDITOR.

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CHLOROFORM FOR CRIMINAL PURPOSES.

From time to time we have discussed, in the REPORTER, the possibility of employing chloroform for criminal purposes. Not unfrequently the daily papers contain accounts of burglars who have effected their thefts in safety by a preliminary chloroformization of the residents. Several times a year we notice reports of felonious assaults on females, which they allege were committed after they had been brought under the effect of anæsthetics; sometimes by a handkerchief held before their nose; once, not long since, by having been handed an illustrated paper to read, on opening which the plaintiff immediately fell into a stupor, because, as she alleged, chloroform had been sprinkled upon the sheet!

We have always maintained that for such uses the employment of chloroform is wholly impracticable. This opinion was based on a somewhat wide observation of the effects of the drug in both healthy and unhealthy subjects, and upon an examination of the evidence on the topic, but not upon direct experiment. We are, therefore, gratified to see that the experimenters who have tested the matter most recently are, without exception, disposed to deny this criminal use of the anæsthetic.

The evidence for and against has been summed up in an article in the *Vierteljahrschrift fur Gerichtliche Medicin*, (Bd. xxiii, 1 Heft), by Dr. WINKLER. He calls attention to the fact that as early as 1850, Dr. SNOW, of London, an investigator of rare merit, combatted the opinion, then very prevalent in England, that crimes would be facilitated by the discovery of anæsthetics. In spite of his efforts, the possibility of such an offence was recognized the next year, in the English "Prevention of Offences bill," passed by Lord Campbell's ministry.

There would seem to have been undoubted instances where burglars have used chloroform. At least, there have been known cases, one a few years ago, in the northern part of this city, where a house was robbed, and the odor of chloroform was distinctly perceptible in the chamber of the residents the next morning. They said they had been narcotized. On the supposition that this statement was untrue, it may be that the burglars actually did try this means, emptying a vial of chloroform in the room, in the belief that thus the inmates would be anæsthetized. The clause in the Prevention of Offences bill would lead them to believe this would be efficient. Another surmise would be that the inmates robbed themselves; that, in detective slang, the burglary was a "put up job," and the chloroform a "blind."

Dr. WINKLER says that nowhere in Germany, in which country forensic medicine is most carefully studied, has a single instance of such criminal use of chloroform been reported. Dr. STEPHEN ROGERS, of New York, in an article noticed in the REPORTER in 1871, distinctly repudiates the possibility of the crime. Still later, Dr. DOLBEAU, of Paris, brought a series of original experiments on the subject before the

Parisian Sociètè de Medicine Legale. What prompted him to it was the old charge, preferred against a young man by a girl, that he had chloroformed her during sleep, and violated her. Dr. DOLBEAU tried the experiment on dogs, men and women, in health and in sickness, with and without the previous administration of a narcotic. The general result is that with the greatest caution, with absolutely pure chloroform, and by very slow degrees, a few persons, those who are especially liable to the prompt effect of chloroform, may be anæsthetized during sleep. Such a conclusion means, that for the ordinary purposes of the burglar or felon, chloroform is much more dangerous to him than to his victims, for with the greatest care, he would wake them in the large majority of cases, and this greatest care could only be exercised by a skilled administrator of chloroform.

This conclusion does away altogether with the allegation that it is possible to employ it for such intents, and any persons proffering such an explanation of a robbery or rape, throw themselves open to a very well-founded suspicion of being a particeps criminis.

In this discussion, those cases where alleged violation has taken place on persons under the influence of the anæsthetic, do not come. Such a crime is very possible. No physician should consent to anæsthetize a woman without the presence of one or two witnesses. The peculiar susceptibility of some females to orgastic sensations of a subjective nature is too well-known to be disputed, and too common for a practitioner to overlook in taking precautions for his own good name.

NOTES AND COMMENTS.

Notes on the Chemistry of the Urine.

G. Schleich, in the *Journ. für Prak. Chem.* (N. F.), x. 261. gives the results of the comparison of the method for the determination of urea by sodium hypobromite, with other methods of determination.

A. P. Fokker (*Archiv. f. Physiologie*, x 153), suggests a new method for the determination of uric acid, depending on the fact that ammonia produces an insoluble compound with uric acid in an alkaline solution.

F. A. Falck, in the *Berichte d. Deutsch. Chem. Gesellsch.* viii, 12, adapts the volumetric method of Volhard for the determination of chlorine to the determination of chlorine in the urine, which, as is known, depends on the property of silver chloride not being decomposed by a sulphocyanide. Ammonium sulphocyanide and a ferric salt is added to the solution containing the chlorine as a neutral chloride. The standard solution of silver nitrate is added, until the blood red ferric sulphocyanide is decolorized by the formation of white silver sulphocyanide. The amount of silver solution used indicates the amount of chlorine present, plus the amount of sulphocyangen used in the end reaction; this latter amount of silver is determined by the addition of a standardized ammonium sulphocyanide solution, and the difference indicates the amount of chlorine. J. JR.

Remarks on Consultations.

A correspondent observes, with considerable justice, "In the country and small towns a consultation generally means that the patient or relatives, or both, have become dissatisfied with the treatment of the attending physician, and, on this account, seek the aid of another. The consulting physician is commonly well aware of this, and seldom fails to improve the opportunity thus offered, to injure the attending physician. He usually criticises him, and takes the case. If the patient recovers, he claims to have made a cure; if the patient dies, his excuse is that he was called too late. Should the consulting physician not do this, he will, at least, leave the impression that the case has not been properly treated."

CORRESPONDENCE.

FOREIGN.

Letter from Vienna.

VIENNA, Aug. 25th, 1875.

ED. MED. AND SURG. REPORTER:—

The Summer semester of the Medical Department of the University of Vienna has not been marked by anything special in any of its numerous departments. The warm weather,

which came so unseasonably and lasted through the month of June. seemed to act so oppressively that both professors and students made a simultaneous rush for the country. Several important changes, however, have taken place in the Faculty. Drs. Moritz, Kaposi, Isidor Neumann, Leopold Schrötter, Karl Störk and Henry Ausspitz were created *Ausserordentlichen Professoren*, and will continue to lecture and give courses.

Professor Rokitansky resigned his chair, as the following farewell address will show:—

I have taken the liberty of translating and sending it in full. It is particularly valuable, and characteristic of the great professor.

This address was delivered in the amphitheatre of the Pathological Institute of the University of Vienna, July 16th. 1875.

"MOST ILLUSTRIOUS ASSEMBLAGE:—After having yesterday closed my course of lectures with a consideration of the anomalies to which the human brain is subject, I find myself at a very momentous and serious occasion. Were I individually not cognizant and appreciative of this fact, the deep sympathy which has assembled you in this auditorium to-day would have made me so. I see assembled before me the corporation of students, as well as colleagues and friends of both early and more recent days, and I thank you all most heartily. It is this that causes me to hope that you will hold me, as well as my efforts, in lasting remembrance.

"I resign, gentlemen, at a period later than that provided for by legal dispositions;* for the bell whose stroke marked my seventieth year did not check me, as you know, either in my course or in the performance of my duties; for I continued the same, in a manner comparable to the inertia of dead matter, for a considerable time beyond the point mentioned; and this, as I must candidly confess, with undiminished love for my office as teacher, and for you as my disciples.

"I further cease to belong to the class of active officials, and now join the well-known order of pensioners, a group whose nature and position have not yet been defined with precision, by either descriptive zoologists or physiologists. Yet this group possesses some well marked characters; they are, in the first place, incapable of work; in the second, they are tired out with work; and lastly, perhaps, possess a decided dread of work; then they become mere consumers and seekers of pleasure, in order to make up, if possible, for that which they missed during their more active period. These are qualities at the same time noteworthy and demonstrative of the fact that this class is not free from its peculiar dangers.

"Notwithstanding all this, I do not propose to leave work altogether. It is true that I cease all communications with the academic body, but should not like to do so without leaving a legacy. You are all aware that each generation bequeathes its conditions, whatever their nature, its problems, and solutions of other problems, to the next generation; and what more noble heritage could I make over to this body than rich food for thought and reflection? With this, I turn more particularly to you, most honored corporation of students.

"Parting as you and I do does not necessarily signify that we intend to separate altogether, but it might mean that I should not pursue the identical path to a certain goal with you, or rather, that I must relinquish the leadership, and either compulsorily or voluntarily remain behind in the journey, to see you disappearing gradually in the distance, under another's guidance. This may have its import, but only a true one. We are all borne by a great common current, in which many sub-currents flow clearly and smoothly, together with the dashing foaming currents of the masses, mutually striving for the mastery, all running turbulently along, all finally flowing into the great, quiet, general current, comparable only to the smooth, all receiving, all quieting ocean.

"Gentlemen! Age naturally occupies a high standpoint, affording a comprehensive view of all around. Yes! In the knowledge gained through years of unremitting labor, not only in one specialty but also in general social communications, it finds it is justified in looking even into the future; consequently, that which Ranke says of those spiritually living, that they are more fascinated in general ideas than by minor interests, can well be applied to old age. Thinking as I do of my leave taking, and my farewell speech, it seems that I owe you who are pursuing the road opened by the irresistible advance of new ideas. not only a sentimental farewell, but should also unbosom myself before you in other respects.

"Firstly, with reference to the science which I have represented, I would like to repeat what I have said on another occasion: "I have, fulfilling the requirements of the times, obtained for Pathological Anatomy so powerful a recognition in German science, and engrafted it to such an extent on the curriculi of medical science, that I can designate it a foundation for a Pathological Physiology and for all scientific investigations in medicine. On the other hand, I consider it appropriate to open before you, on whose minds the academic career has laid its impress, a vista of the chief direction of ideas in our time.

"Gentlemen! Two things characterize our time: first, the increasing demand for knowledge and the endeavor to keep it free from everything that is not pure knowledge. Second, the tendency of the development and the bringing forward of invidiuality, after having obtained a field for supervision by means of previous ability and knowledge. In times of yore this was the function of simple, clearly and deeply thinking minds; at the present day all are the subject of a universal aim. One as well as the other involves a contest; the first the defence of

* According to law, a Professor resigns his position on attaining the age of seventy. Should it be considered desirable to retain him in office, his resignation is not accepted.

a well regulated administration of the intellectual economy of the individual; the second, the aggressive contest of individuals against each other, the contest for the foundation and preservation of a vocation either professionally, socially or officially.

"Individualism is a function of the individual. It needs at the present day no laborious study to arrive at the conclusion that in the individualizing of organized material the possibility of progress exists. While looking at creative nature, we find that occasionally productions pursued erratic courses, forming individuals who, on account of the inappropriate combination of their component parts, perished sooner or later; this is a necessary consequence of the possibility of contradictions occurring in the course of a development from lower to higher organisms, by the necessary rivalry between badly developed individuals and contradictions resulting from the others. If we now aim for the development of our individuality in the manner pointed out, we obey an instinct, an inborn feeling of right, and if this feeling has become general in recent times, only so this finds its cause in the appreciation by the individual of his mental capabilities in general, and of the signification of the natural sciences more especially. This again is due to our control of the Natural Forces. The necessary presupposition for the carrying out of this right is the tendency to freedom, and this makes its appearance in our day as a contest for religious and political freedom; freedom in science and investigation, in art and in the arts, etc.; in short, for freedom of the individual in all directions. In this way every organic existence has its rights as such. This is often objected to, but in vain, in trying to oppose so-called inborn duties to these rights. Duties, obligations and customs are things, of themselves, the result of the mutual exercise of this right.

"The principal form in which all strife of the individual manifests itself, is in a strife for property, for material and for mental property, and for the performance of the rights and claims which it has gained, by its own labor and by a waste of its own substance, as individual, unalterable rights. This alone goes to show that the essential nature of the individual desire for freedom is, in its essence, a desire for freedom of labor, and that the individualism of our day is based upon the demand for the vocation to the character of the individual. Here the vocation is a development of the individuality itself, as well as the possibility of the increasing improvement, by which the individual gains a recognition for its vocation.

"As various as the directions in which individuality becomes developed in the process of obtaining *gain*, so numerous are the forms which it may resume in the method of appropriating this *gain*. In this we find differences which characterize the innermost path of the individual, and which, in their extremes, on one side are called high-mindedness, on the other moral obliquity.

"Gentlemen—In your labors in the field of science you have gained a certain amount of individual property, which property forms the weapons with which you are to enter the arena of life. When an individual has gained any important position by intense work, he has necessarily reduced the importance of some other individual's position, or driven him out of the field altogether. To maintain the position once attained, as well as to increase it, the individual is forced to rely on his new exertions as well as progress in general; consequently, any development in itself challenges contest. In this contest, conservativism may often temporarily gain the day, by some over-flooding reaction, but progress the more surely, sooner or later, leaves the contest as victor, and is naturally a merciless victor. No one can stand aloof from the battle. Whoever is not well armed for it must sooner or later perish. Conduct your contest with honest weapons, and always bear in mind that the fair battle is to the one condition, for the ennobling of posterity, and if you cannot stand at the head of progress, you can, at least, stand by its side.

"Although no one can doubt the justness of these conditions after what has been said, certain contradictions and a certain stern reality are not to be denied. The severity of individualism has always been recognized, and endeavors have never been wanting to relieve this. There is one morbid condition caused by individualism; that is, self-conceit, which manifests itself in vanity, and in a desire to make itself known by external marks of importance, and allows itself to be carried away in noisy demonstrations, which public opinion, if worldly disposed, at least, ignores, and ultimately passes over, to deal with matters of actual importance. It is given to few, even if possessed of the most overpowering individuality, to employ the same as precisely, in such a characteristically antique fashion, as Phryne did before the assembled judges.

"Gentlemen—I do not hesitate to assert that we are standing on the threshold of an abuse of individualism, the so-called modern individualism. The same is degenerating to a worship of individualism, on the grounds of a limited realistic acceptation of the individual character, and which acknowledges the most inconsiderate egotism and the pursuit of success, without reference to ways or means. Could it be wondered at if science, thus far reveling in the enjoyment of true freedom, were to be surprised by a reaction, even while opposing this tendency with a feeling of moral indignation?

"Gentlemen—I think you will agree with me if I adduce the endeavors in the cause of the emancipation of the sex to individualism. When nature separated, individually, sexually, she created two factors, equal in value but not in kind, which were calculated to mutually compensate each other. Man instantly comprehended this. It is true that I have a sympathy for all progressive ideas and liberal tendencies, but I object to all such as are calcu-

lated to enable woman to compete with man. If anything is calculated to put the two sexes in inimical relation to each other, it is the arming of woman for that contest in which we all are engaged against each other.

"The interest is a natural one which raises the question as to what influence intellectual progress, especially in the domain of the Natural Sciences, has had, and will have, upon social order. Here it is quite patent that profound changes are preparing to take place. In depending, as we do at the present day, more upon our scientific convictions, and, on the other hand, less on that dogmatism which asks so much from reason but concedes so much in other ways, we discover that morality seeks its proper foundation in the intellect. First, we see the view gaining the upper hand that man lives in a world in which a pitiless law of the natural forces reigns; a law beyond which there is no appeal; that he cannot pray for any occurrence which is to benefit himself or to injure others; that he performs all his actions himself, and alone bears the responsibility. Then we see the knowledge gaining, that on the one side the universe is ruled by nature, on the other side that man is nothing more than a lesser reality in this nature; that he stands in connection with all these things, and that only in moments of dejection or conceit can he flee therefrom.

"Work is the only admissible mode of contest between individuals. The division of labor which is a necessary result of the concentration of great labor marts and wholesale production, has become the cause of a difference in the kind of labor, as well as in the exertion and waste of the labor, and finally, also, of the profits of the labor. Let me here sing the praises of that kind of work which, by means of the mental labor employed in the same, is elevated beyond all material compensation, which can never be sold, which has banished despotism and superstition, and which has made the individual what he is, by making him depend upon himself, and raising society to a level whose solidity is founded upon the mutual respect of its component members.

"In addressing you as disciples of the University, I have reference to profitable knowledge as well as to questions of general interest; your academic training, your clear emancipated knowledge, furnishes you with all the requirements of adequate development of individuality. It is your duty to enlighten the minds of those with whom you come in contact, by word, deed and example. You can, from that which has been said, abstract a rule for the guidance of your actions, and obtain a recognition of it.

"Beyond all things, you must maintain the cause of right, and not swerve from it in the least, remaining firm to the conviction that even the slightest laxity in the moral tone is injurious to the individual, diminishes the value of his labor, corrupts the sense of rectitude of others, and finally threatens the very foundations of social order; while strictly opposing any erratic tendencies in this direction, both in yourselves and others, you should still retain a warm fellow feeling, and make allowances where a rigid adherence to right alone might lead to sternness. Permit me further to add a few serious words in the practical application of your academic labors; as, in the course of this practical application, they frequently run the risk of losing their dignity. First and foremost, *never allow such work to lose its essential academic character; never allow it, degenerating, to become tradesmanlike; finally, never allow it to lose the stamp of refinement, or to lack its characteristic ingredient, the laborer's ethical identification of his work.* In your proper sphere, your battle for success must be fought in the fair field, and after achieving your end, never diminish your zeal. When the demand for your work and its price increases, resist firmly the temptation of losing sight of the whole field of your vocation by ignoring the theoretical sciences.

"Then, finally, gentlemen, I tell you, who will not be free from afflictions, that by misfortune an elevating influence is wrought upon the individual. Yes, that even bitter want, the darkest side of life, may become the dawn of a higher wisdom; as the poet says, in the Manfred, "sorrow is knowledge."

"Now, gentlemen, I must take a last farewell, but shall never forget nor lose sight of you. May you, as I am drifting towards the great silent ocean, remember me kindly."

Prof. Herchl, of the University at Gratz, a former assistant of Prof. Rokitansky, has been selected to fill the chair just vacated. The next semester begins October 15th, 1875. Several improvements on the Vienna Hospital grounds are deserving of notice. In the central walk, a handsome stone fountain is being put up, for the benefit of the patients and their visitors. On the left side of the first Hof, opposite the wards of Prof. Billroth, a pedestal, with the bust of the late Prof. Selm, is in the course of erection. When visiting the unique collection in the Pathological Museum, now contained in the new Pathological Institute, I noticed an excellent white marble bust of Prof. Rokitansky, which the workmen were unpacking. It is the gift of the faculty and students, and as it is an excellent likeness, it will ever be an object of universal interest. Yours, etc.,

CHARLES S. TURNBULL, M. D.

NEWS AND MISCELLANY.

The New Building of the Medical Department of the University of the City of New York.

The inaugural opening of the new building of the Medical Department of the City of New York took place on the 13th of September. Prof. Charles Inslee Pardee, the Dean, delivered the opening address. The new edifice is situated on East Twenty-sixth street, opposite the entrance to Bellevue Hospital; it is four stories

high and basement; has an elevation of 70, a frontage of 60, and a depth of 100 feet, and is built of Philadelphia brick with Belleville stone trimmings. The style of architecture is Italian Gothic. The door-piece is likewise of Belleville stone, handsomely carved, having polished columns of Tennessee marble for its support, which are adorned with Gothic capitals. The ventilating and heating (steam) apparatus are of the most approved methods. The hall on the first floor is 16 feet wide by 100 feet in length, and is marble tiled; at its end is a broad and massive staircase leading to the lecture room. On either side of the hall are the Dean's office, reception room, museum, clerk's office, and janitor's apartments; next to the reception room is a private stairway leading to the front part of the second story, which contains the Faculty waiting and private rooms, the patients' waiting and examination rooms, and the laboratory. The rear of this floor is occupied by the lecture hall, which likewise takes in the rear of the third story; it is 50 by 60 feet, and 30 feet in height; it has a seating capacity of 500. The third story is devoted to the private laboratories of the professors of physiology and chemistry, and to private rooms for the use of the members of the post-graduate and auxiliary Faculties. On the fourth floor are the students' laboratory and the general dissecting room, besides which are private dissecting rooms for the professors of anatomy and surgery, and the cabinet of electricity. The dissecting room has an area of 3000 square feet, is well provided with closets, and contains forty tables, thus allowing 200 students to dissect at the same time. A room is also provided in the building for ophthalmoscopic and laryngoscopic examinations, and for the use of the spectroscope. The cost of the building is $60,000, the value of the site $40,000, and the cost of scientific apparatus and instruments $50,000. The architects are D. & J. Jardine, of New York.

—A medical observer in Japan writes that the cheekbone of the Japanese is double, in many cases, instead of being of a single structure. The additional bone is united to the other by a suture, and is believed to be peculiar to the Japanese race.

QUERIES AND REPLIES.

Compound Tincture of Catechu.

Dr. J. F., of Ky.—This is officinal in the Dublin and London Pharmacopœias.

Take of Catechu, coarsely powdered,	4 oz.
Cinnamon, bruised,	2 oz.
Proof spirits,	2 pints.

Macerate 14 days, express and strain.

Stomatitis Materna.

Keep the bowels regulated by the use of saline laxatives, and place the patient upon iodide potash; or, if much emaciation and debility exist, I prefer syr. iod. iron. As a wash, I use a saturated solution chlo. potash, acidulated with mur. acid, and a similar solution of borax, slightly colored with mur. tinct. iron. These I direct to be used every two, four, or six hours, pro re nat., alternately. The best plan is to begin with a weak solution, and strengthen it as the parts become accustomed to it, or the disease yields. As domestic remedies, I know of no washes better than a pretty strong decoction of the bark of the root of white sumach, or of the bark of the wild plum, sweetened with honey This treatment, with nutritious diet, will, I think, subdue the disease in most cases. If there be carious teeth, creating irritation, extract them.

Respectfully, D. C. M. CAMPBELL.
Near Tyro, Miss.

OBITUARY.

DR. R. H. SHEPPARD,

Of Eureka, Ill., was drowned on the night of Sept. 2d, in Farm Creek, near Peoria. He was returning home from the funeral of his wife's father. Dr. S. was a man of large Christian heart, and a successful physician. He leaves a wife and aged mother to mourn his loss. His age was 32.

MARRIAGES.

ANDREWS—DIXON.—On the 15th inst., by the Rev. P. V. McDermott, Thomas H. Andrews, M. D., and Emma T., daughter of Joseph E. Dixon, all of Philadelphia.

BATES—WARREN.—On Thursday, September 16th, 1875, at the residence of the bride's parents, Bangall, Dutchess County, New York, by Rev. G. H. Gregory, of this City, Xyris T. Bates, M. D., of New Lebanon, and Emily A., only daughter of Andrew Warren, Esq.

HIGGINS—FITZSIMMONS.—Tuesday evening, September 21st, by Rev. William Greenough, Mr. J. Mitchell Higgins, M. D., and Miss Josephine V. Fitzimmons, both of Philadelphia.

RISHER—WHITE.—Tuesday evening, September 14th, 1875, by the Rev. E. McHugh, at the residence of the bride's mother, Cincinnati, Mr. A. C. Risher and Miss Dora White, daughter of the late Dr. Horace B. White.

DEATHS.

BRADFORD.—At the Burnet House, Cincinnati, Elliott C. only child of Dr. T. C. and M. A. Bradford.

FLINT.—At La Union, Salvador, on the 17th of last August, Dr. John Felix Flint, U. S. Consul, in the 45th year of his age, oldest son of M. S. Flint, of Montgomery county, Pennsylvania.

KRACKOWIZER.—Thursday, September 23, 3 P. M., at Sing Sing, Ernest Krackowizer, M. D., in his 54th year.

SHELMERDINE.—On the 14th inst., at the residence of her husband, No. 832 N. Tenth street, Philadelphia, Eliza, wife of Dr. Robert C. Shelmerdine, aged 72 years.

STILES.—In Windsor, Vermont, August 31st, Dr. J. N. Stiles, aged 62 years.

WEEKS.—Suddenly, on Monday, September 20th, Dr. Cyrus Weeks, in his 69th year; for over forty years a practicing physician in New York City.